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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,333	06/01/2001	Jose Iborra	CHG-001.3P	3961

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FALK AND FISH
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MORGAN HILL, CA 95037

EXAMINER

RAMPURJA, SATISH

ART UNIT

PAPER NUMBER

2124

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,333

Applicant(s)

IBORRA ET AL.

Examiner

Satish S. Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/15/2002
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the application filed on 06/01/2001.
2. Claims 1-3 are pending.

Information Disclosure Statement

3. An initialed and dated copy of Applicant's IDS form 1449, received on 06/18/2002 and 07/17/2002 are attached to the instant Office action.

Specification

The disclosure is objected to because of the following informalities:

4. Specification includes underline words and highlighted words (e.g. pages 8, 9, 40, 56 etc.) It is difficult to read and understand.

Appropriate correction is required.

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Clarification and/or correction are required.

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Regarding, claim 1, on page 94, lines 15, the limitation, "or" is unclear as to which source is used to retrieve service arguments. In addition, on lines 17 and 18, the limitation, "or" is unclear as to which display option is created and which another process is invoked a service.

Claim 2, has the similar limitation to those in claim 1 with respect to "or", recited on page 96, lines 16 and 18.

Claim 3, has the similar limitation to those in claim 1 with respect to "or", recited on page 97, lines 16 and 19.

The rejection of the base claim is necessarily incorporated into the dependent claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,199,195 to Goodwin et al., hereinafter called Goodwin, in view of US Patent No. 6,571,232 to Goldberg et al., hereinafter called Goldberg and further in view of US Patent No. 5,742,754 to Tse, hereinafter called Tse.

Per claim 1:

Goodwin disclose:

- A process for automatically translating a specification defining a computer program to be automatically written by a computer into a computer program that implements the requirements of said specification (col. 1, lines 6-10 “automatically generated source code, and more particularly to automatically generated object-oriented source code”), said specification defining at least classes of objects having attributes, services and relationships with other classes, said specification written in a formal language (col. 1, lines 19-22 “object model describe object classes, attributes of object classes, relationships between object classes and inheritance between object classes”), comprising:
 - using a computer, automatically write computer code that will request user name and password, receive any responses and authenticate the user (col. 9, lines 17-20 “The code generator 330 provides an Application Program Interface (API) that allows other servers to connect, identify a model to be transformed into a server, and invokes code generation for that server” and col. 16, lines 4-6 “important function is to authenticate client/server programs in order to guarantee security at the software product level”);
 - using a computer, automatically write computer code that will determine this user's privilege level and query said formal language specification and determine all object attributes this user has privilege to see and all services this user can invoke (col. 13, lines 26-28 “The templates... define what is the language of the code... and the unified model determines what is generated... user passes the code generator... a model name... or... Interface Definition Language (IDL) file from model input” and col. 13,

lines 52-56 “code generator... support the creation of... IDL, JAVA... based on certain user preferences and selections” also fig. 6 and related discussion);

- using a computer, automatically write computer code which queries said specification for all services of all classes that any authorized user may invoke and identifies an object server which will implement said service (col. 1, lines 56-58 “automatically map information between an object-oriented application and a structured database, such as a relational database”);
- using a computer, automatically write code that will retrieve service arguments for all services from a user or from another object server or from another process, as appropriate (col. 6, lines 37-41 “allow developers to generate objects based on a framework of services they author by composing services based on the object templates into objects that support the composed behaviors and methods”);
- using a computer, automatically write code that displays menus options, icons or creates any other means by which a user or another process can invoke a service, and which receives input to invoke a particular service and responds by sending a message to the appropriate object server to invoke the service, said message including the necessary arguments for the service to execute (col. 6, lines 37-46 “developers to generate objects based on a framework of services they author by composing services based on the object templates into objects that support the composed behaviors and methods. This is accomplished through the code generator 210, which interfaces with the unified models 206” and col. 9, lines 20-23 “server generated by the code generator 330 is to support

Next Generation Information Infrastructure (NGII) services, interfaces, graphs of objects, and data aware objects”);

- using a computer, automatically write code that implements an object server for every service, each of which first checks to verify that state transitions are valid and make sense for the current state of objects the object service will be altering the state of (col. 6, lines 64-67 to col. 7, lines 1-7 “system also provides a data server (described in reference to FIGS. 3 and 7) for performing run-time object queries that are transformed to access information from enterprise resources with results instantiated between business objects... generated within the composed object service framework... accomplished through the use of an object query service (OMG compliant) and provides a CORBA service to which clients can submit object queries over generated objects and instantiated objects into objects with the composed behaviors defined by the framework”);
- using a computer, automatically write code for every object server that verifies preconditions are satisfied before making state transitions of any objects the states of which are acted upon by the object server (col. 7, lines 41-50 “This mapping is manifest in the unified models 206... but also allows specification of how these objects map to data resources within the enterprise and allow clients to query against these objects, and, at run-time, to have results returned as objects within the complex object framework specified and tailored by a developer”);
- using a computer, automatically write code to make all valuation calculations required by said specification of each object server (col. 17, lines 2-5 “run the code generator 330 to

generate the source code objects that will support the services in the Interface Definition Language (IDL) file that describes the interface of the objects to the business applications”).

Goodwin does not explicitly disclose using a computer, automatically write code to verify that integrity constraints specified in said specification on the values of attributes of objects have been satisfied after execution of a service and take action if said integrity constraints are not satisfied.

However, Goldberg discloses in an analogous computer system using a computer, automatically write code to verify that integrity constraints specified in said specification (col. 3, lines 46-50 “the database schema access object also verifies that an SQL query created by a user is valid by submitting the query to the database engine of the underlying database”) on the values of attributes of objects have been satisfied after execution of a service and take action if said integrity constraints are not satisfied (col. 8, lines 22-25 “When the server completes processing of the request, the skeleton code 508 and stub code 506 return the results to the client 500. If an error has occurred, exception information generated by the server or by the ORB is returned”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of code generator to satisfy the attributes in the specification automatically as taught by Goldberg into the method of automatically generating code as taught by Goodwin. The modification would be obvious because of one of ordinary skill in the art would be motivated to fulfill the attributes need as specified in the

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specification automatically to provide automatically testing of a system as suggested by Goldberg (col. 3, lines 13-24).

Goodwin does not explicitly disclose using a computer, automatically write code for every object server to test trigger relationships specified in said specification after execution of a service and carry out appropriate action if a trigger event has occurred.

However, Tse discloses in an analogous computer system using a computer, automatically write code for every object server to test trigger relationships specified in said specification (col. 1, lines 8-10 “automatically testing software products on a multiplicity of servant computer systems having different hardware configurations” and col. 4, lines 42-43 “test suites are uniquely designed for specific software products”) after execution of a service and carry out appropriate action if a trigger event has occurred (col. 4, lines 43-45 “when test suites are executed during the testing process, errors specific to the software product under test may be uncovered”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of automatically testing software as taught by Tse into the method of automatically generating code as taught by Goodwin. The modification would be obvious because of one of ordinary skill in the art would be motivated to test software automatically to provide improved testing system with less human interactions as suggested by Tse (col. 2, lines 60-63).

Claim 2 is the apparatus claim corresponding to method claim 1 and rejected under the same rational set forth in connection with the rejection of claim 1 above.

Claim 3 is the computer program product claim corresponding to method claim 1 and rejected under the same rational set forth in connection with the rejection of claim 1 above.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to further show the state of the art with respect to automatically software generation.

US Patent No. 5,742,827 to Ohkubo et al.

US Patent No. 5,499,371 to Henninger et al.

US Patent No. 6,275,976 to Scandura

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satish S. Rampuria whose telephone number is 703-305-8891.

The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satish S. Rampuria
Patent Examiner
Art Unit 2124
07/12/2004



ANIL KHATRI
PRIMARY EXAMINER